

Appln No. 10/019,148

Amdt date October 14, 2004

Reply to Office action of July 14, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An electro-mechanical drive device for an adjustment device of a motor vehicle, comprising:

a gearing with a gear housing;

an electric motor mechanically connected to the gearing;

a control device mounted in the gearing housing and having at least one power semi-conductor for controlling the electric motor; and

means thermally coupled to the at least one power semi-conductor as a heat sink for drawing off waste heat from the at least one power semi-conductor, wherein the means is integrated in the gear housing,

wherein the means is connected to or located within the gear housing such that the stability of the gear housing is increased.

2. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein for the purpose of coupling, the means and a power semi-conductor housing are fixed with force-locking engagement against one another in order to reduce a heat transfer resistance.

Appln No. 10/019,148

Amdt date October 14, 2004

Reply to Office action of July 14, 2004

3. (Currently Amended) An electro-mechanical drive device according to claim 2, wherein for the force-locking engagement, the means is spring-tensioned ~~through a spring element~~ against the power semi-conductor housing.

4. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein a heat conducting means is mounted for thermal coupling between the means and a power semi-conductor housing.

5. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein the gear housing has an opening for inserting the means and guide elements for positioning the means in an end position, and the means is lockable in the end position.

6. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein the means is injection moulded at least in part in an injection moulded plastics housing of the gearing.

7. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein the gear housing has supporting parts, the means is hermetically sealed in the gear housing against fluids and dust particles, and the means is positioned against a wall of the gear housing wherein the wall is thinner than the supporting parts of the gear housing.

Appln No. 10/019,148

Amdt date October 14, 2004

Reply to Office action of July 14, 2004

8. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein the means acts as a heat conductor and is coupled with a cooling element to discharge the waste heat diverted away from the at least one power semiconductor to the cooling element, and the cooling element is a support plate on which the gear housing is fixed.

9. (Currently Amended) An electro-mechanical drive device according to claim 8, further comprising ~~a mechanical connection between the heat conductor and the gear housing, and~~ a fastening element integrated in the heat conductor for fixing the gear housing on the cooling element.

10. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein a bearing for a gear element of the gearing is integrated in the means.

11. (Previously Amended) An electro-mechanical drive device according to claim 10, wherein the means has positioning elements for positioning the control device relative to at least one of the gear element and a magnet fixed on the gear element.

12. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein the means is a cooling lid, an opening of the gear housing is closed by the cooling lid and the cooling lid has cooling ribs.

Appln No. 10/019,148

Amdt date October 14, 2004

Reply to Office action of July 14, 2004

13. (Previously Amended) An electro-mechanical drive device according to claim 12, wherein the opening is sealed by a material connection, comprising one of ultra sound welding of the cooling lid to an edge of the opening, and sticking of the cooling lid to an edge of the opening through an adhesive between the cooling lid and an edge of the opening.

14. (Previously Amended) An electro-mechanical drive device according to claim 1, wherein conductor panels which are insulated from each other are arranged on the means to connect at least one structural element and at least one interface of the control device.

15. (Previously Amended) An electro-mechanical drive device according to claim 14, wherein the conductor panels have contact elements which can be contacted during fitting of the means.

16. (Previously Canceled)

17. (Previously Canceled)

18. (Previously Canceled)

19. (Previously Canceled).

20. (Currently Amended) A hermetically sealed gear housing of an electro-mechanical drive device of an adjustment device

Appln No. 10/019,148

Amdt date October 14, 2004

Reply to Office action of July 14, 2004

for motor vehicles for diverting waste heat from a power semi-conductor which is integrated in a control device in the gear housing wherein at least a part of the gear housing is thermally coupled to the power semi-conductor by a thermal coupling to draw off the waste heat, and the thermal coupling is connected to the gear housing such that the stability of the gear housing is increased.

21. (Added) An electro-mechanical drive device according to claim 1, wherein the means is in physical contact with the power semi-conductor.

22. (Added) An electro-mechanical drive device for an adjustment device of a motor vehicle, comprising:

a gearing with a gear housing;

an electric motor mechanically connected to the gearing;

a control device mounted in the gearing housing and having at least one power semi-conductor for controlling the electric motor; and

means thermally coupled to the at least one power semi-conductor as a heat sink for drawing off waste heat from the at least one power semi-conductor, wherein the means is integrated in the gear housing,

wherein the gear housing has supporting parts, the means is hermetically sealed in the gear housing against fluids and dust particles, and the means is positioned against a wall

Appln No. 10/019,148

Amdt date October 14, 2004

Reply to Office action of July 14, 2004

of the gear housing wherein the wall is thinner than the supporting parts of the gear housing.

23. (Added) An electro-mechanical drive device for an adjustment device of a motor vehicle, comprising:

a gearing with a gear housing;

an electric motor mechanically connected to the gearing;

a control device mounted in the gearing housing and having at least one power semi-conductor for controlling the electric motor; and

means thermally coupled to the at least one power semi-conductor as a heat sink for drawing off waste heat from the at least one power semi-conductor, wherein the means is integrated in the gear housing,

wherein the means is a cooling lid, an opening of the gear housing is closed by the cooling lid and the cooling lid has cooling ribs.

24. (Added) An electro-mechanical drive device according to claim 22, wherein the opening is sealed by a material connection, comprising one of ultra sound welding of the cooling lid to an edge of the opening, and sticking of the cooling lid to an edge of the opening through an adhesive between the cooling lid and an edge of the opening.